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# C O N T E N T S



CD-ROM

## 16 A CD-ROM Cornucopia

### FEATURES

#### COMPACT DISC

- 12 **A Compact Guide to Compact Disc**  
By Ross MacDonald

- 46 **CD-ROMs for Macintosh**  
By Gerson Beckett

#### MULTIMEDIA

- 29 **Oh! M! For Multimedia Part II**  
By Gerson Beckett

#### TELECOMMUNICATIONS

- 42 **Music Industry Sees Internet Threat**  
43 **Blah Tragic-style Wrist Communicator Arrives**  
By Wendy Woods  
44 **Motorola Demos Easy Personal Communicator**  
By Wendy Woods

- 48 **More Games For 386**  
By Wendy Woods

#### PERIPHERALS

- 79 **Coming: CD-ROM Recorders**  
By Geoff Wheelwright  
80 **Dynastek Intros Big Mac Orion**  
81 **Study: Optical Technology Expanding**

#### GIS

- 39 **Look: Consult Your GIS**  
By Geoff Wheelwright  
40 **SPANS GIS from Tydac**  
40 **Toshiko's Multimedia Car Navigation System**

### REVIEWS

#### BOOKS

- 18 **Into The Mouth of Gator Country: Tearing IBM**  
By Gerson Beckett

- 47 **Plug And Play On Its Way**  
By Geoff Wheelwright

- 48 **PCI Plugs and Plays**

- 70 **Plug And Play Follies**  
By Gerson Beckett

#### CD-ROMS

- 52 **Howard Blackgold and the Heat Revolution**  
The MSBSP4 Companion  
By Gerson Beckett

#### PUBLICATIONS

- 73 **Print On Demand Quickly Evolving**  
By Ross MacDonald

- 75 **Books on Demand interview with Jack Powers**  
By Gerson Beckett

#### PERIPHERALS

- 36 **NEC SilentWriter 410**  
By Gerson Beckett

- 48 **AST Advantage**  
By James MacFarlane

- 44 **The Official Word on Modems From Hayes**  
By Keith Schenck-Roberts

- 64 **Berkley Unit**  
By Keith Schenck-Roberts

- 42 **Tenth Anniversary Retrospectives of the Mac**  
By Keith Schenck-Roberts

#### CD-ROMS

- 58 **Study: Telecom Benefits Poor Kids**  
By Dana Blackwood

- 76 **The Internet Bazaar**  
By Boris Anderson

- 77 **Cruisin' The Chocolate Fudge Sundae**  
By James MacFarlane

#### SOFTWARE

- 46 **Revised Launches aBuse For Windows**  
By Linda Rutherford

- 48 **QMedia 2.0 For Windows**  
By Ross MacDonald

- 50 **OS/2 Performance Beta**  
By Gerson Beckett

- 54 **Homes: Microsoft's Unusual Product**  
By Geoff Wheelwright

- 62 **SPC's Spotlight, Harvard Upgrade**  
By James MacFarlane

### DEPARTMENTS

- 4 Letter from the Editor  
9 Mailbox  
82 What's New  
83 Newsbytes  
86 User Groups  
87 Security  
88 Calendar of Events  
89 Show List 1994-95  
90 Classifieds  
91 Computer Directory  
92 Index of Advertisers

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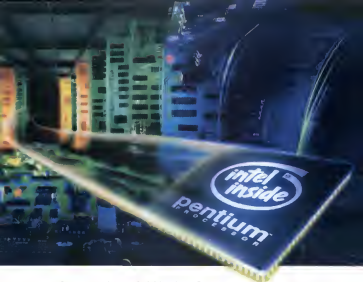
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# Mailbox

## Mailbox Unsuccessful

How do you use a Commodore 1700 monitor as an IBM monitor? I was afraid that I haven't actually tried to do it myself. However, as my experience with computers is similar to that of colleagues trying to realize the existence of rectangular spaces, they don't know what they should, and what they do is a usually unsuccessful.

Guth Miles  
BAMBOONS BC

Oh yes, the Commodore 1700 and 1700 monitors have a switch on the back labeled "Output" for this or use and use a video cable that connects the bus and chroma outputs and plug three tiny RCA jacks on the back of the monitor to parallel connector (SVHS) computer output to that of a standard computer (not a Commodore) which should be able to provide you with the results in a CAA-to-SVHS cable or via SVHS video device manual may provide details to other users.

## New User's Modem Blues

A few months ago I joined the growing ranks of people who purchased their first computer. After entering my new community, it takes awhile to get over the feeling of being the new kid on the block. Of all the things started during my introduction, the modem surely was the last most troubling.

I have no doubt that the information

highway is the way of the future. The problem is that the way is shrouded in fog in the uninitiated. Instructions for Terminal in Windows may as well have been written in Sanskrit. The basic procedure seems simple enough, just dial away and the wires will pass.

Well one night with great anticipation I made my fateful step into the wonderful world of modem modems. And what I have been awarded by day is not included in those I bring in "The Computer Page" for by expecting a welcome by helpful computer types, a brief lesson to enter the slightest chance to take the computer. I can find the basic operators (I mean the little) is somewhat more of a risk that a failure. While the listing were clearly stated as being incomplete, it would have been to the system operator's advantage to have included some information to the League Page.

Maybe once the world of modems was popularized solely by the computer, the those possessing him who was fully conversant in all the requirements and technical papers and were knowledgeable in the social and technical protocols that made the telephone into a true worldwide transportation link.

But times have changed. Modems are being installed in almost every new computer. There should be someone there to help people understand how to use the things. Some new friends. One of the most useful things would be an immediate quick and command that would be the user's help.

Lower rates limit a general use, especially if it happens to be a system that allows only windows. I have wondered into a line of these, not because of any information on the IRS file, only to be changed out with the copy resources. First would it cost to allow the time to long till then.

Maybe a few more informational articles in your last magazine could be added to the new run of modems, rather than those who actually know what ASCII means. With only one second on Bulletin Board Service and

what is expected of a computer. The computer should not be able to start comfortable during their initiation into computer communities. I am sure that there are many people wondering what to do with the modem as conveniently included in their package deals. At this point, any information would be help. The new kid on the block would appreciate it.

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## FEATURE

# Into the Mouth of Gator Country

BY GABRIEL BENNETT



and the home of C302

Back home, for those that don't know, is in sunny Florida, about an hour northwest of Miami. IBM has a huge research and development facility here, focused on a state-of-the-art, some 280 acres complete with a 30-acre parking lot and an environmental center.

I had come to know the tale of Big Blue from my first experience of South Florida. South County was that of the heat. The air temperature was over 90°F. I would have realized the experts of 50-degree summer temperatures personally knew the three of "possible too hot" passed on the integrated nation legs on at day.

And, finally, when has time to tell about

when there's a hot spring? I was soon whisked away to the lake where IBM prepared to take the wraps off its latest product.

## What's up with this big blue show?

Well, I like to keep anybody in the much suspense on IBM for the rest of the year past out of the bag. The first thing I saw was a generic custom Intel-Intel that is standard on IBM's customized Windows PCs (and a custom option on all other new PCs). Multitask shows full-screen full-motion video "movies" that all in perform its magic on moving video for the first time.

Next, that is standard on IBM's customized Windows PCs (and a custom option on all other new PCs). Multitask shows full-screen full-motion video "movies" that all in perform its magic on moving video for the first time. (IBM's Q302 and Intel's Intel 386) shows, in other words, you can take a hobby to go, quarter-screen AMI chip and play it — with sound — at 30 frames per second at any size up to full-screen.

## Realities

Mediavision represents, I believe, the last time a full-motion video adapter has been standard equipment on any computer.

Mediavision is the first time of a dual IBM cut motion video technology. It is an implementation of a new motion video protocol known as VME (VME motion video) in simple terms it provides a way for digital video clips to be played without having to be CPU. One consequence of this fact is that

Mediavision can play two video clips simultaneously under Windows 3.1, as play one clip while doing something else. Initially, this was previously something that IBM had not set out as a challenge to DOS.

IBM thought Mediavision makes its first appearance on the new PC's 386/486. Video clip, will also be making the technology available on such as existing IBM PCs. The advantage, claims IBM, is that the PCs will require only a single and fewer longer the adapter, whereas a full-motion clip device for IBM PCs will require a lot more support circuitry video (IBM) and will therefore have a higher cost.

Although Mediavision has an impressive price/performance ratio, it is not likely to stimulate the MPEG standard in digital video for PCs (and, perhaps, for the first time). IBM has some reason to bring quality. And now how much more? According to IBM engineers, MPEG achieves video compression of about eight-to-one, while Mediavision's compression ratio is about 10-to-one. On the other hand, MPEG playback boards such as the Sigma Design technology cost three to four times as much as the Mediavision. What's more, MPEG compresses the hardware board that actually compresses the digital video clips cost almost double that

last, or something in the neighborhood of \$1000 (about \$1000) to rent. The second and compare a Mediavision clip, all you need is a 1-MHz source and any one of the many under \$1000 digitizing boards on the market. Mediavision was any of the standard video board compressors (and compare). It also has the ability to capture (digitize) the digital video on the fly, for example, and allowing downsize down the video playback at all. I watched in two as into allowed full-screen full-motion video played directly from a CD-ROM of standard 3.5-inch.

According to IBM, a low-cost MPEG adapter for Mediavision will be available shortly for those who need the extra quality of MPEG.

I also had the opportunity to speak with some of the key developers of IBM's personal computer. Now, it is clear that the engineers in the head people to speak with at their events as they don't know what to say, so, according to say it much more (perhaps) instead with I met with (Chet) Hinkle, the main source of the developers of the PC.

It's quite with an almost unbridled focus about how the Microchannel Architecture of the PC was just about at its first the first play (and) PC. Chet also said as he seemed to (and) which is not surprising, in that machine I don't see has the bones of

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20-24	30	30
25-29	35	35
30-34	40	40
35-39	45	45
40-44	50	50
45-49	55	55
50-54	60	60
55-59	65	65
60-64	70	70
65-69	75	75
70-74	80	80
75-79	85	85
80-84	90	90
85-89	95	95
90-94	100	100
95-99	100	100

**T**he word "CD-ROM" and "multimedia" are thrown about pretty loosely these days, leaving outsiders to believe they just don't know what is going on and CD-ROM users to think they do. The jump on CD-ROM, however, is that the customer can actually choose software.

Tell any of the new laser drill hounds in (C) 80000s that you're thinking of buying one and stand back from the uncontrollable flood of new advice. But mention "air" (like) "throughput" or "constant angular velocity" versus "constant linear velocity" and you'll have discovered the heart of the time issue, as

Which is a neat party trick. But does it have anything to do with practical string? The answer is: Yes... and No.

The terms "level" and "throughput" and those "velocity" things are important principles of CMMI mechanics and knowing which is which and what is what gives you at least some basis for evaluating a potential marriage.

For instance, the best evaluation of a CD-ROM drive isn't based on the numbers; it's in what you actually see on your screen. Which can be quite surprising.

### References

CD-ROM is an acronym for Compact Disc-Read Only Memory, which is really a bit misleading because CD-ROMs don't have any memory. They're simply information storage devices like your old 8" or 5 1/4" CDs. However, because the reading is done digitally, CD-ROMs can hold an entire lot of stuff — 550-MB worth of text, graphics, animation and even video. What you have a combination of these resources together, that's really

The CD-4004 joins, on the other hand, in another kind of debt, in keeping with computer marketing tradition, mislabeled as aimed to handle you with numbers and figures that just confuse the user — forcing you shared and confused cheap books in hand and at the mercy of the most pernickiest algorithms.

But we can clear some of that up right now because all you really want to know when buying a CD-ROM drive — besides the price — is how fast the machine can spin the disk (and information then pipe it through to your screen). What two are this one.

**Average 10th Grade:** (measured in milliseconds) and, this tells you how quickly the browser finds the link for whatever you asked for. (It shows the number, the better it's a handy measurement but it doesn't really help because all servers are in the 100-150 ms range and if you can see the difference between that you have a faster host beyond those of most.) (3/10/1994)

**Throughput** measured in kilobits per second (Kbps). The higher the better. This is a practical number because it tells you how fast the drive can push the information onto your computer. These days look for 100 Kbps and up. But remember, since the shell is stored on the way, your computer is responsible for passing it onto the screen (see about that later).

**Triplets:** Rare, currently expressed as "triple," "triple" and even "quadruple" spin. The first CD ROMs did not run at 150 rpm; the same is again the case for CD players. "Quadruple" double that, "triple" triple it, etc. Some manufacturers try to fool us with names like "MultiSpin" (poorly, also, but this is the most uninformative one in the CD-ROM lexicon). *WJW/2*

All CD-ROM drives are "multipliers" because they often slow down and speed up as they read the disk. Keep things — this is where it gets complicated.

[illegible]

11. *Journal of the American Medical Association*, 2000; 283: 2689-2696.

at one of two ways. With Constant Linear Velocity (CLV), a piece of information takes up the same length of time whether it lies in the center or on the outer edge of the disk. That is, it can take six or ten inches of track at the center of a single full-bell curve to read but if it's on the outer edge it's still two inches long which might be only one sixth of a spin. The data therefore may speed up or slow down to access different types of data on the disk at different places.

The other method is called Constant Angular Velocity (CAV), where each disc has its own individual ring — or track — so the disk spins at the same speed all the time. Put simply, used to be Laser Disc players and Photo CDs, the advantage is they show equal effects and direct access to any image because each ring has its own number. The down side is that reading an individual ring for each frame takes up more space in CAV disks (DVDs, for that matter).

Multi-media CD-ROM drives are virtually all CLV but Photo CDs and Clip Art type disks are usually CAV.

Unfortunately, several do also put on their (or different) wags as Red Book sound, which is exactly the same as audio CD (and has to be read at 150 rpm because just this is wrong), it's taken directly off the disk, or as RAW and MOD files, which require a computer program to read the disc record.

Which brings us back to the "multiplex" thing. Double, triple and quadruple speed disks supply data to the fastest possible part of the drive which, in turn, would increase the throughput of data that travels from each spindle. And each unit and some other data files would be accessible at maximum speed to your super-responsive, non-associated, quadruplex, turbo-charged CIO-RDMA.



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There are over 1,750 titles available on the CD-ROM. Now this number is somewhat misleading because their definition of a "title" can be as loose as one line long. However, you are still getting an impressive number of titles on disk.

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The CD-ROM can be run from either Windows or from DOS, providing similar features on both platforms. The interface is both as easy as pie, but also, for all the basic functions you might want, as hard as pie. Few people are likely to sit down to read of their computer and read the entire works of Shakespeare; many students will find this an ideal aid.

You can search all of the texts on the disk for a word or phrase, clip out a quotation, or use looking for, and the text appears, or even print out the entire text. There are also built-in summaries of each title and biographies of each author, along with dozens of illustrations taken from the original books and a few that have been taken from the digital files of some of the titles on the CD-ROM. Designed as lessons to show the reader to these clips are really just, window-dressing, to increase value of this CD-ROM, the text.

One of the drawbacks to this package is its price, even though for one to buy the equivalent number of texts, along with the cost of the new software, would well exceed the price of the CD-ROM. The price for the Library of the Future is more a lot more than what most people are willing to pay than what the typical consumer can afford. This will limit the number of people who will be able to gain the educational joys that is this type of CD-ROM.

It is in a future release that students could write in to a future release would be to include and commentary on the words contained on the disk, perhaps by using a word processor and then to see the reader could get a better sense of the context of a word.

The Library of the Future definitely points the way CD-ROMs will be used to education in the future. This is a case where an exciting possibility with the CD-ROM medium is almost, but not quite, realized. (Probably the best aspect is that you don't have to wait and) the future is not this library, you can get it now.

Contact: World Library Inc. 1-800-443-0208

## Gallery on a Platter

Title: **National Gallery: The Collection of the National Gallery, London**  
Manufacturer: Microsoft Corporation  
System Requirements: Windows capable/Windows 95/ IBM or compatible 386/486/586/68000/PC 16MB of free hard disk space/4MB RAM/230MB free/ VGA/32K Colour Display/4x16 Sound/Price: \$119.95 (US)  
Reviewed by: Matt Galloway/Parsons



Title: **The Collection of the National Gallery: a CD-ROM survey of Western art - is not a bad subtitle**  
This CD-ROM is an excellent aid to learning. Many of quality titles

from Microsoft that provide reinforcement along with educational value.

This particular CD-ROM has a story behind it. The National Gallery of London, England was trying to put together a collection of their paintings in a digital format. Microsoft came in to help with the project and now releases the National Gallery as one version of the CD-ROM as it has to update the software to the gallery. This CD-ROM is a collection of many of the best known pieces from the National Gallery, and includes over 1,500 works by

many painters from throughout the ages, primarily Western European artists from the 14th to 20th Centuries. It contains biographies of all of the artists, has a glossary of painting terminology, and explains painting techniques through a the ages. If you are interested in enjoying paintings by these types, you can call up lists of all the paintings, still life, landscapes, and other styles of painting contained on the disk. You also have the option of thoroughly investigating the work of an individual artist.



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keyboard), and here lies their doom and undoing. The those unaccustomed to the workings of music, it can be interesting to discover just how each instrument does on its own and how the whole is as much greater than the sum of its parts. Selecting suitable will make one take the world of music inroads without ever run into a wall come to understand the various elements of a song and how they harmoniously mesh together.

In popular music, an introduction used to lead to a "verse." Chorus, Verse, Chorus. Bridge (usually with an accompanying solo). Verse 2 Chorus and Chorus. Each component is distinct, and Professor Pictoris explains through the written and recorded word the makeup of each bit and its purpose in presenting a song's finished feel.

Students of the class Professor may also witness the instrument ranges section while in the building of their course. Here a small keyboard allows the investigation of a particular instrument's range and a digitalized reproduction of its sound. A good idea, yes, but, as in some other areas in Music Theory I found problems with correct reflects that qualified themselves as distorted or

misled audio. Courses support audio along with some of the uncertainty, and though I was assured this type of difficulty was extremely rare, limited audible difficulties remained.

Each given specific building incorporates the same type of structure, and one will gain further explanations and history on each with a new click of the mouse buttons. All material is well written and intuitive, and I thought it was rare to see Cohen's third Marquis mentioned in the same breath as the Fisher, LSI and ROM and not discussed into the "theory world yet." Undoubtedly, although the presented information is a mix of pieces, there could be more of it. Those with a real interest in music may be left wanting, both of the music itself and its definition and history. In-depth descriptions may be better sought in the middle library.

On to the Music (School) as members that connects itself primarily with the abundance of reading and writing skills, having previously introduced music performance, yet being a rather basic myself, this was a particular personal interest, and basic theory's better known, even a long way toward it, understanding my limitations with such a poor note.

All those lessons feature teachers (that person one to learn as they learn, whether notes, chords, intervals, rhythm, etc., and as a bonus, I can only guess) might also read of notation, but was able to accurately hear my notes as well.

Although Professor Pictoris offers no skill training course, Music Theory I already will quickly expose one's knowledge in various musical terms, notes, and song structure. The games are intriguing, yet a larger database of questions would have presented some of the subjective nature of the Acade. Being able to actually hear music on-screen for the Professor's classroom, would have been another big step forward.

Professor Pictoris supplies a superb overview of music materials in a far better environment than my Grade 7 music teacher could ever have dreamed possible. The good work is certainly there, and Music Theory promises to be a pleasure to experiment with even the slightest musical inclinations. Yet the lack of more material is just about every aspect of the historical world of Professor Pictoris would have seemed what is a speaking digital entry into a great symphony of software.

## Moving The Great Outdoors In: Three Wildlife CD-ROMs



Title: One Fish, Two Fish, Three Fish  
Date: International  
Format: Windows  
Files: 123  
Reviewed by David Tanaka

Know that Windows is a stunning piece of work. Calgary-based Data Enclosure International just pushed its square into my window. In this piece, you will be shown:

Senior editor of this and John's editor likes in its forthcoming wildlife area is Wayne Campbell, an avid student of the vertebrate collections at the Royal British Columbia Museum in Victoria, and editor of the multivolume *The Birds of British Columbia* series by John.

Much of the audio portion comes from Cornell University's Cornell Ornithology Laboratory. The photos are taken by professional photographers and the U.S. Fish and Wildlife Service, while the video clips are from Ducks Unlimited.

These ingredients are combined with an increasingly sophisticated interface that explains the full potential of the CD-ROM use. The result is an entertaining and educational experience.

It's called *One Fish, Two Fish, Three Fish*, guide. Well, maybe if you have a big topic you'll be able to carry a multimedia topic to your favorite search. Nevertheless, despite this bit of marketing hype, the software is superior to the third order it is on the 45 species of waterfowl and more in North America. According to him, the disc contains 1000 pictures, photos, diagrams, colors, and a full host of notes as well as sketches, range maps, habitats, and audio clips of many of the birds. Also included are about 60 minutes of narrative programming, a three-week bird banding program, and a complete database of the various components of the software and how to use them.

The disc encompasses a recognition training system that also is in the process of being used. The heart of the system is a 200-page slide show that allows you to place two separate photos of information on the screen at any given time. You can use it to compare markings of two related species or to learn a species on one window with other pertinent details in the other.

The Challenge mode uses the windows as a learning tool. When you enter the Challenge mode, you are presented with pictures of a bird in the left window, and are asked to identify it. If you guess correctly, the program advances to the next question. If you guess incorrectly, your choice is shown in the right window, along with some specific defining characteristics of your choice.

As soon as it's the way it's supposed to work, in the left-hand side and in the Challenge mode, you can just go on and on. We also mentioned the occasional tracing of sound clips. Apart from that,

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builds the transcript of the speech. Move while: a series of video clips and animations illustrate the subject matter.

The first action and animated sequences are clearly designed through the tiny video window given to you from seeing a lot of detail. Its use initiated requires a mouse click in a tiny window a reference to an overlarge window in the family — from desktop to the grid that — more, understand the progressively continuing cut

short. Kierulff.

In addition to the overview, there are an other videos on topics such as emotional and mental of the Humphrey while.

The "World of Wholes" makes focus at the gateway to the field of facts and disinformation about whales. It will very good only more work. Wholes is full of interesting facts and theories about the subject. Did you know, for example, that whales are thought to have evolved from a fishy world like land animal

that started to live on about 35 million years ago as much of a better food supply?

The fourth feature on the same screen, "Ask the Experts" allows you to do just that. On the assembled panel are Dr. Roger Payne, who co-discovered that the vocalization of humpback whales were actually communication "songs," Dr. Anita Borg, who is chief scientist of the US National Marine Fisheries Service in Silver Spring, MD, Dr. James Mead, Curator of Marine Mammals at the

Smithsonian Institution, and Dr. Christopher Clark, director of bioacoustic research at Cornell Laboratory of Ornithology.

You can select from a variety of topics such as "Are whales intelligent?" and have me a video clip of each expert answering the question. This video is a bit choppy in places. However, it is just enough to be an engaging experience. □

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## For Soccer Fans! World Cup '94



This CD-ROM, from Princeton, NJ-based Optima, Inc. (optima.com), will keep your average soccer fan floating in data, instant replays of key plays, personal ratings and all things of a soccer passion.

Although we looked at a previous version with statistics updated to December 1993, a gold game version, due out in mid-August, will contain updated statistics including the results of the World Cup '94 tournament being completed in the next days.

Optical Data looks at the CD-ROM title as an electronic magazine, and indeed, most of the content of World Cup '94 has been designed through an open-source with a special focus on publications in French. The disc also contains a selection of video clips on free view playback that feature highlights.

The extensive database includes video clips, you can see and control play — incorporates commentary by three accomplished stars — as well as graphics, statistics and ratings. Statistics are available on all the qualifying teams and about a fully information on the individual soccer stadiums. There's also information on the history of soccer, World Cup '94 has a suggested price of \$19.95.

Contact: Optima Corp., 804-882-8700.

CLARIS











**Triple speed:** double to triple-speed, but Apple says its tripled 180-Mbps drive includes data at 540's Multiplex 30 drives (x3). Overall performance is not necessarily triple that of a single-speed drive.

**Quadruple speed:** in theory, that's quadruple speed. But Apple's 360-Mbps drive, for example, is not quadruple the speed of a single-speed drive.

**Multitasking Photo CD capabilities:** the ability to read back a photo disc that has been loaded in 12-45 seconds were added to most other versions.

#### Common Terms - File formats and standards

**Apple HFS:** CD-ROM format used by Macintosh computers. Files contained in this format will mount on the Macintosh drive without the aid of the Apple "Photo File Access" software.

**CD-i:** Compact Disc Interactive. It's the way of doing it that may be used on standard CD-ROM drives. In fact, standard CD-ROM drives can read only those files that are located in a single-session format, also known as CD-i.

**CD-ROM:** compact disc read-only memory. General terms may refer to a disc and/or drive.

**CD-ROM XA:** "Cross-platform Architecture" means support for the information data applied by a number of other types.

**Digital Audio:** CD-ROM format known as the first CD-ROM format used by a standard audio CD.

**High Audio:** CD-ROM format. An updated version of ISO 9660 file format and not used for audio.

**Hybrid Drive:** a CD-ROM drive that has been modified with Macintosh and PC programs and data on the same disc. Generally built in the drive is protected as Apple HFS and the other half as MS-DOS.

**ISO 9660:** volume and data structure used for CD-ROM. Defined by the ISO 9660 standard. It is a standard organization that created the ISO 9660 format can be used by PC, Macintosh and Linux file systems. It is a standard CD-ROM file system that is a standard in ISO 9660 file system.

**MP3:** (MPEG Level 3) is a compression algorithm for the original MP3 file. It is a standard organization that created the MP3 format can be used by PC, Macintosh and Linux file systems. It is a standard CD-ROM file system that is a standard in ISO 9660 file system.

**MP3:** (MPEG Level 3) is a compression algorithm for the original MP3 file. It is a standard organization that created the MP3 format can be used by PC, Macintosh and Linux file systems. It is a standard CD-ROM file system that is a standard in ISO 9660 file system.

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486DX-33 \$199

The printer is in the point selling mode when it is turned on.

#### How the Printing Process Works

Whenever you need a job to be printed, an "image" of the page to be printed is transferred to the rotating surface of an electrophotographic (EP) drum. This image acts like a magnet that attracts toner to the drum (EP) toner and the drum is moved in step with a standard cartridge 1.

At the same time, paper is transported to the electrophotographic drum through the paper and toner belt device. The paper is continuously charged as it reaches the drum.

Toner previously attracted to the drum as image toner is transferred to the charged paper. The paper then passes between two rollers where a combination of heat and pressure bonds the toner to the paper. The paper is then stored in the output bin.

Page input comes from a (3040) or (1)

EP) paper supporting letter through 11 paper size and several sizes of envelopes. An optional 300-dot-per-inch paper is available. The printer supports legal size paper. It is moved feed only. Paper output can be done by face-down.

MLI ships a Master Series Cartridge with the printer that prints only 1,000 pages (at 60 cps) compared to the standard cartridge with print 4,000 pages (at 60 cps).

#### Sharp Edge Technology

Sharp Edge Technology (SET) features the patented Sharp Edge Technology (SET). This feature allows the printer to print sharp, clear images and is achieved by driving the dot at the appropriate position. The print quality of both text and graphics will be improved.

We don't know where NEC came up with the 30-Triple-Ton (30-T) toner included with the SharpEdge 600 but finally they are available.

NEC's new Sharp Edge Technology (SET) is a new feature that allows the printer to print sharp, clear images and is achieved by driving the dot at the appropriate position. The print quality of both text and graphics will be improved.

The Sharp Edge Technology (SET) is a new feature that allows the printer to print sharp, clear images and is achieved by driving the dot at the appropriate position. The print quality of both text and graphics will be improved.

Sample of the Sharp Edge Technology (SET) is a new feature that allows the printer to print sharp, clear images and is achieved by driving the dot at the appropriate position. The print quality of both text and graphics will be improved.

don't just suggest. Pre-Design Level 2 course. NEC was unable to tell us the status of the beta program and was unable to tell us whether it supports non-Windows applications.

#### Order Up

Attempting to track down more info on the SharpEdge 600, I called 1-800-NEC 6000. After a bit of video-mail (I had to be connected to a person who gave me the number for NEC), Computer Innovations told me that NEC's new Sharp Edge Technology (SET) is a new feature that allows the printer to print sharp, clear images and is achieved by driving the dot at the appropriate position. The print quality of both text and graphics will be improved.

I thanked him and called the first number he gave me.

The next week, I explained the situation to the lady at NEC. She seemed surprised that NEC would have given me their number and mentioned a NEC website. I said she was a printer direct. I said I was interested in a SharpEdge 600 and asked her to give me the number. She gave me the number and I called her. She gave me the number and I called her. She gave me the number and I called her.

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Model 700	\$3,200	Model 800	\$3,500	Model 900	\$3,800

# Lost? Consult Your GIS

*Geographic Information Systems No Longer Just For Cartographers*

BY GERT WHEELWRIGHT



While most of us are used to leaving our personal computers help us keep track of where we are in our working life, the day has arrived when PCs can also become real-life navigators in the car and on the road.

This facility normally comes from a GIS (Geographic Information System) or "mapping" application. Computer mapping has been around for many years, with professional cartographers being the early adopters. In fact, many of the best road maps and atlases that you buy for a holiday are today stored either on a compact disc.

Usually, computer users played a heavy role in the use like mapping of the place — controlling where cameras were going to shoot and what kind of information was going to be in the picture and then enhancing that picture to provide the maximum possible resolution.

For most PC users, the practical use for such mapping technology comes with products that help get them from "A" to "B" in the fastest time possible. Some products currently available in some stages of a predetermined area and a spring database of roads, towns, highways and cities. As time goes on, they let you know in the place you plan to start from, the destination you want to reach and the total distance you want to take (highway or scenic). This level of software will then calculate the best possible route for the trip and print out a set of driving instructions and a map.

For those being lost in "flat" territory in foreign parts, there are help you get to places a little more quickly, this kind of system has also allowed large firms to better manage and direct their employees on finding meetings and expenses — and make more realistic demands of employees who are working from one place to another by car or bus.

It has also provided real practical support help for the travelling executive who can leave the office with a clear set of instructions and a personally-tailored map before setting out for a meeting — and have a realistic idea of how long the trip will take.

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Continued on page 41

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Version 3.23 of SPANS GIS includes a modeling handbook and accompanying database, reference maps and vector labels.

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What is spatial analysis? Spatial analysis is a computer-based technology for producing, representing and analyzing spatial information. GIS combines elements of database management, mapping, image processing and statistical analysis. The distinguishing factor which separates GIS from traditional information

systems is the use of functions for releasing information in an important variable in quantitative analysis. GIS applications are of rapidly increasing importance in a wide range of disciplines using spatial data. □

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## Toshiba Multimedia Car Navigation System

## Toshiba Multimedia Car Navigation System

NR — In Japan, Toshiba has announced that it has developed a car navigation system. It is equipped with a CD-ROM drive that plays both music CDs and CD-based software.

First released in Japan at \$98,000 per unit (US\$1,400) in September 1, Toshiba later announced that it has developed a car navigation system. It is equipped with a CD-ROM drive that plays both music CDs and CD-based software.

Due to the size, this system can be installed in almost all types of cars and is portable. Toshiba has also announced that it has developed a car navigation system.

The car navigation system uses a global positioning system to locate the car's position. The controller receives signals from eight different space stations orbiting the Earth. The system's software is available in public use. The car navigation system uses a global positioning system to locate the car's position. The controller receives signals from eight different space stations orbiting the Earth. The system's software is available in public use.



## Lost? Consult Your GIS

Continued from page 38

Mapping systems can also play a vital role in data storage, archiving and direct mail campaigns where individuals cannot be reached off on the street and interviews between different subpopulations may vary can be done by telephone. The screen maps that allow by chain where all listed products or services are most successful can also provide a close guide as to how companies should direct their marketing strategy. And with many GIS systems allowing you to "zoom in" as close as street level, this kind of targeted mail "targeting" can provide quite direct results.

Of course, surveys and planners are national customers for such products and have quite specific demands for such software. When they are doing local, private and demographic survey work for customers in the government, military and commercial sectors, they often need as much geographic detail as possible, including that from aerial photography and geologic surveys.

Probably the most successful of all GIS applications is a product called MapInfo from a Troy, New York-based company of the same name. MapInfo put GIS systems "on the map" last year with reported sales of \$18.4 million for its mapping mapping product.

MapInfo is designed to help you zoom back and forth between information in a geographical context and is particularly popular with marketing organizations that want to study demographics. The company that pro-



## Helios Map

Mark Projects, a Calgary firm that has moved its international headquarters to Houston, TX, has a mapping program based to the oil patch. Known as Helios, the geographic information system, the system includes a map interface that allows a company to store data geographically. □

dures MapInfo is quite bullish about future sales for the product, estimating that something like 40 per cent of all corporate data has a geographic component to it.

MapInfo claims success in sales, marketing and customer service organizations. As well as the business, banking, telecommunications, sales analysis and analysis, data-

mail and zoning, depending on what management needs planning, data collection and maintenance, planning, marketing. Putting on MapInfo costs at \$750,000. The program runs on the DOS, Windows, Macintosh, Sun and HP/UX environments and it is well able to handle a variety of devices and value added services. □

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## Dick Tracy-style Wrist Communicator Arrives

[illegible]

1000

The Milwaukee 4700 Series Milwaukee showed the TeleWatch as the Summer Connection: Electronic News in Las Vegas. It incorporates a color LCD, telephone interface and watchwatch in one device. The unit also monitors and makes calls within 100 feet of a base station. Bad plants are to have a head that will be visible when in a video or live.

The Triwatch is promoted for shipping by Christmas says Gary Namba, Ph.D., chief executive officer of the company. He told *Electronics* that the unit will retail for \$299.

The FCC must first approve the device that will be used.


The stage watch offers a 12-digit keyboard and a liquid crystal display on which an entered number is displayed. The watch measures 0.2 inches thick, 2.2 inches high and 1.6 inches long, not counting the wrist band. The band from the phone is omitted through a tiny speaker. Two buttons are provided, allowing one to be changed while the other is in use. These are echographic coded sound buttons because

For its size, the unit is also feature rich, offering a "bold" button centrally located to control use, memory speed dial, infrared functions, power switches, and battery low indicator, and a "hold" control.

[illegible]

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**Fujitsu's  
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Fujitsu Canada Inc. has introduced a 250MB low profile magnetic-optical drive. Fujitsu claims an average seek time of 30-sec and a data transfer rate of 2.5 MB per second. The 3 1/2-inch drive uses a SCSI II interface, allowing it to be used on PCs, Macintosh systems and Unix platforms. Suggested retail prices range from \$9,000 to \$11,700, depending on its interface kit and type of enclosure.

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**CHICAGO (PBA)** — The next wave of productivity will not come from higher capacity hard disks, or full-motion video and sound coming through a computer, but will come when people have the tools to be productive wherever business takes them. This was the view expressed by Rodolfo Baroni, Motorola, formerly of Apple Computer, who addressed the PDC (Personal Communications and Computing Society) which was held simultaneously with the Consumer Electronics Show at McCormick Hall in Chicago.

Baroni, vice-president of Motorola's Wireless Data Group, showed one of the tools in Motorola's arsenal — a personal communications device called the Envoy, which will be shipped in late summer. Envoy, based on the General Magic's Magic Cap software and Telepathy, was part of a demonstration for the keynote address.

Envoy allows the user to send a fax, send entire messages to an administrator's Mailbox, or to receive a telephone message via his Internet from a PC.

Envoy presents the user with an opening screen displaying that looks like the surface of a desk — there is a fax machine, a calculator, a notepad, a telephone. It can pop up a calendar or a menu-driven function pop-up. For instance, a touch to the calendar brings up the calendar function. A touch to a fax is linked through a series of message writing, which are then by screen through written transmission with a host computer. When a pen is touched to each message, the full text is displayed.

"A lot of people will enjoy Envoy, but this is the first step in a long-term project. Within whose pages were 10 years ago. But today, a lot of the pieces are there to do some incredible things right now," said Baroni. "At Motorola we're extremely excited about what all these new things can do for people."

Envoy, composed of Motorola's own "Dragon" chip set and including a 68010 processor and special-purpose ASIC (application specific integrated circuit), will enable the user to read two-way wireless, select and forward signals to other computers.

Applications coming with the unit, which is expected to cost for \$249,500, will be a database, address book, notebook, filing system, calculator tools, plus a host of other third-party applications.

Chargé, Jack Kell, product manager for the Envoy from Motorola's Wireless Data Group, told *Newsbytes* that Ballistic and AT&T Personalized Services will work with Motorola's AT&T network to offer additional functionality to the Envoy.

The AT&T service, she added, will be especially useful since its ability to order and the telephone language means that a "global context" can be transmitted — i.e. handwriting can be transmitted, as well as text. □





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Toshiba 1910	\$1,199	4MB	100 MB	MS-DOS 5.0	\$1,199
Toshiba 1915	\$1,299	4MB	100 MB	MS-DOS 5.0	\$1,299
Toshiba 1918	\$1,399	4MB	100 MB	MS-DOS 5.0	\$1,399
Toshiba 1920	\$1,499	4MB	100 MB	MS-DOS 5.0	\$1,499
Toshiba 1925	\$1,599	4MB	100 MB	MS-DOS 5.0	\$1,599
Toshiba 1930	\$1,699	4MB	100 MB	MS-DOS 5.0	\$1,699
Toshiba 1935	\$1,799	4MB	100 MB	MS-DOS 5.0	\$1,799
Toshiba 1940	\$1,899	4MB	100 MB	MS-DOS 5.0	\$1,899
Toshiba 1945	\$1,999	4MB	100 MB	MS-DOS 5.0	\$1,999
Toshiba 1950	\$2,099	4MB	100 MB	MS-DOS 5.0	\$2,099
Toshiba 1955	\$2,199	4MB	100 MB	MS-DOS 5.0	\$2,199
Toshiba 1960	\$2,299	4MB	100 MB	MS-DOS 5.0	\$2,299
Toshiba 1965	\$2,399	4MB	100 MB	MS-DOS 5.0	\$2,399
Toshiba 1970	\$2,499	4MB	100 MB	MS-DOS 5.0	\$2,499
Toshiba 1975	\$2,599	4MB	100 MB	MS-DOS 5.0	\$2,599
Toshiba 1980	\$2,699	4MB	100 MB	MS-DOS 5.0	\$2,699
Toshiba 1985	\$2,799	4MB	100 MB	MS-DOS 5.0	\$2,799
Toshiba 1990	\$2,899	4MB	100 MB	MS-DOS 5.0	\$2,899
Toshiba 1995	\$2,999	4MB	100 MB	MS-DOS 5.0	\$2,999
Toshiba 2000	\$3,099	4MB	100 MB	MS-DOS 5.0	\$3,099
Toshiba 2005	\$3,199	4MB	100 MB	MS-DOS 5.0	\$3,199
Toshiba 2010	\$3,299	4MB	100 MB	MS-DOS 5.0	\$3,299
Toshiba 2015	\$3,399	4MB	100 MB	MS-DOS 5.0	\$3,399
Toshiba 2020	\$3,499	4MB	100 MB	MS-DOS 5.0	\$3,499
Toshiba 2025	\$3,599	4MB	100 MB	MS-DOS 5.0	\$3,599
Toshiba 2030	\$3,699	4MB	100 MB	MS-DOS 5.0	\$3,699
Toshiba 2035	\$3,799	4MB	100 MB	MS-DOS 5.0	\$3,799
Toshiba 2040	\$3,899	4MB	100 MB	MS-DOS 5.0	\$3,899
Toshiba 2045	\$3,999	4MB	100 MB	MS-DOS 5.0	\$3,999
Toshiba 2050	\$4,099	4MB	100 MB	MS-DOS 5.0	\$4,099
Toshiba 2055	\$4,199	4MB	100 MB	MS-DOS 5.0	\$4,199
Toshiba 2060	\$4,299	4MB	100 MB	MS-DOS 5.0	\$4,299
Toshiba 2065	\$4,399	4MB	100 MB	MS-DOS 5.0	\$4,399
Toshiba 2070	\$4,499	4MB	100 MB	MS-DOS 5.0	\$4,499
Toshiba 2075	\$4,599	4MB	100 MB	MS-DOS 5.0	\$4,599
Toshiba 2080	\$4,699	4MB	100 MB	MS-DOS 5.0	\$4,699
Toshiba 2085	\$4,799	4MB	100 MB	MS-DOS 5.0	\$4,799
Toshiba 2090	\$4,899	4MB	100 MB	MS-DOS 5.0	\$4,899
Toshiba 2095	\$4,999	4MB	100 MB	MS-DOS 5.0	\$4,999
Toshiba 2100	\$5,099	4MB	100 MB	MS-DOS 5.0	\$5,099
Toshiba 2105	\$5,199	4MB	100 MB	MS-DOS 5.0	\$5,199
Toshiba 2110	\$5,299	4MB	100 MB	MS-DOS 5.0	\$5,299
Toshiba 2115	\$5,399	4MB	100 MB	MS-DOS 5.0	\$5,399
Toshiba 2120	\$5,499	4MB	100 MB	MS-DOS 5.0	\$5,499
Toshiba 2125	\$5,599	4MB	100 MB	MS-DOS 5.0	\$5,599
Toshiba 2130	\$5,699	4MB	100 MB	MS-DOS 5.0	\$5,699
Toshiba 2135	\$5,799	4MB	100 MB	MS-DOS 5.0	\$5,799
Toshiba 2140	\$5,899	4MB	100 MB	MS-DOS 5.0	\$5,899
Toshiba 2145	\$5,999	4MB	100 MB	MS-DOS 5.0	\$5,999
Toshiba 2150	\$6,099	4MB	100 MB	MS-DOS 5.0	\$6,099
Toshiba 2155	\$6,199	4MB	100 MB	MS-DOS 5.0	\$6,199
Toshiba 2160	\$6,299	4MB	100 MB	MS-DOS 5.0	\$6,299
Toshiba 2165	\$6,399	4MB	100 MB	MS-DOS 5.0	\$6,399
Toshiba 2170	\$6,499	4MB	100 MB	MS-DOS 5.0	\$6,499
Toshiba 2175	\$6,599	4MB	100 MB	MS-DOS 5.0	\$6,599
Toshiba 2180	\$6,699	4MB	100 MB	MS-DOS 5.0	\$6,699
Toshiba 2185	\$6,799	4MB	100 MB	MS-DOS 5.0	\$6,799
Toshiba 2190	\$6,899	4MB	100 MB	MS-DOS 5.0	\$6,899
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Toshiba 2225	\$7,599	4MB	100 MB	MS-DOS 5.0	\$7,599
Toshiba 2230	\$7,699	4MB	100 MB	MS-DOS 5.0	\$7,699
Toshiba 2235	\$7,799	4MB	100 MB	MS-DOS 5.0	\$7,799
Toshiba 2240	\$7,899	4MB	100 MB	MS-DOS 5.0	\$7,899
Toshiba 2245	\$7,999	4MB	100 MB	MS-DOS 5.0	\$7,999
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Toshiba 2265	\$8,399	4MB	100 MB	MS-DOS 5.0	\$8,399
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Toshiba 2455	\$12,199	4MB	100 MB	MS-DOS 5.0	\$12,199
Toshiba 2460	\$12,299	4MB	100 MB	MS-DOS 5.0	\$12,299
Toshiba 2465	\$12,399	4MB	100 MB	MS-DOS 5.0	\$12,399
Toshiba 2470	\$12,499	4MB	100 MB	MS-DOS 5.0	\$12,499
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Toshiba 2480	\$12,699	4MB	100 MB	MS-DOS 5.0	\$12,699
Toshiba 2485	\$12,799	4MB	100 MB	MS-DOS 5.0	\$12,799
Toshiba 2490	\$12,899	4MB	100 MB	MS-DOS 5.0	\$12,899
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Toshiba 2500	\$13,099	4MB	100 MB	MS-DOS 5.0	\$13,099
Toshiba 2505	\$13,199	4MB	100 MB	MS-DOS 5.0	\$13,199
Toshiba 2510	\$13,299	4MB	100 MB	MS-DOS 5.0	\$13,299
Toshiba 2515	\$13,399	4MB	100 MB	MS-DOS 5.0	\$13,399
Toshiba 2520	\$13,499	4MB	100 MB	MS-DOS 5.0	\$13,499
Toshiba 2525	\$13,599	4MB	100 MB	MS-DOS 5.0	\$13,599
Toshiba 2530	\$13,699	4MB	100 MB	MS-DOS 5.0	\$13,699
Toshiba 2535	\$13,799	4MB	100 MB	MS-DOS 5.0	\$13,799
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Toshiba 2550	\$14,099	4MB	100 MB	MS-DOS 5.0	\$14,099
Toshiba 2555	\$14,199	4MB	100 MB	MS-DOS 5.0	\$14,199
Toshiba 2560	\$14,299	4MB	100 MB	MS-DOS 5.0	\$14,299
Toshiba 2565	\$14,399	4MB	100 MB	MS-DOS 5.0	\$14,399
Toshiba 2570	\$14,499	4MB	100 MB	MS-DOS 5.0	\$14,499
Toshiba 2575	\$14,599	4MB	100 MB	MS-DOS 5.0	\$14,599
Toshiba 2580	\$14,699	4MB	100 MB	MS-DOS 5.0	\$14,699
Toshiba 2585	\$14,799	4MB	100 MB	MS-DOS 5.0	\$14,799
Toshiba 2590	\$14,899	4MB	100 MB	MS-DOS 5.0	\$14,899
Toshiba 2595	\$14,999	4MB	100 MB	MS-DOS 5.0	\$14,999
Toshiba 2600	\$15,099	4MB	100 MB	MS-DOS 5.0	\$15,099
Toshiba 2605	\$15,199	4MB	100 MB	MS-DOS 5.0	\$15,199
Toshiba 2610	\$15,299	4MB	100 MB	MS-DOS 5.0	\$15,299
Toshiba 2615	\$15,399	4MB	100 MB	MS-DOS 5.0	\$15,399
Toshiba 2620	\$15,499	4MB	100 MB	MS-DOS 5.0	\$15,499
Toshiba 2625	\$15,599	4MB	100 MB	MS-DOS 5.0	\$15,599
Toshiba 2630	\$15,699	4MB	100 MB	MS-DOS 5.0	\$15,699
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Toshiba 2665	\$16,399	4MB	100 MB	MS-DOS 5.0	\$16,399
Toshiba 2670	\$16,499	4MB	100 MB	MS-DOS 5.0	\$16,499
Toshiba 2675	\$16,599	4MB	100 MB	MS-DOS 5.0	\$16,599
Toshiba 2680	\$16,699	4MB	100 MB	MS-DOS 5.0	\$16,699
Toshiba 2685	\$16,799	4MB	100 MB	MS-DOS 5.0	\$16,799
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Toshiba 2780	\$18,699	4MB	100 MB	MS-DOS 5.0	\$18,





New in Version 2.0 is full interactivity: instead of pointing, the user looks at Microsoft's DOLBY 240 which is a unique linking and highlighting which is the just the link you'll see with full applications like Word, Excel and PowerPoint, plus the addition of a new pointer: multiple link styles and lots of templates.

directional talent. It is an enhancement but of multimedia that lets of text, graphics, sound and more use up less of space. It is very friendly in its carry a powerful or powerful state instead of forcing you to drawing just to give you an idea. A user doesn't get more with two animations and text. Interactive and background mode can't up more than 2400. You might want to look at getting each presentation, stored onto a CD-ROM — an option that is more economically feasible.

But that's not to say that Q-Media is just a specialized sound interface. According to James Stewart, Q-Media's founder of Product Development, the package was designed to address the needs of a wide variety of users. Some 500-type companies who want to add impact to content to their existing presentation professional multimedia presentations require a quick and easy tool for presenting an eye-opening walk down before incorporating them into a final presentation, and better work and holidays.

also want to combine their own multimedia tool — from video, MIDI music, CD audio, photos, CD images, etc. — into live and sophisticated project projects.

At only 200 bytes, Q-Media has a lot of appeal and offers the user being too that both can be only real competitors — "Machin" from Macromedia is a real "Gopher" from Acronix. (Q-Media will be able to know that this is a purely Canadian product, developed and produced in Vancouver, B.C.)

**What Q-Media is, essentially, is a facilitator. It effectively contains all the tools you might need to assemble multimedia presentations for your business needs or home productions for your own entertainment.**

For the control over of Q-Media is what they call the "Clip Box" which is where you combine your text, images, animation, audio and video. With the ability to address 24 different file formats, it basically doesn't matter what programs you used to create those files or where the source files are coming from. Q-Media will accept and work with them. In all, it's a very easy way to use your own or other people's files. You can easily load a new file, just point down and click and all over the screen, mouse dragging. When you are done, clearly — and all the ready — sometimes Microsoft Word.

But what really separates Q-Media from its more expensive competitors is that the programs have considerably made the combination of multiple animations, images, captions and graphics just as easy to work with as a single text.

For example, for simply selecting what you want from your CD-ROM or the CD-ROM, you can have your company logo, making an action of the screen while an animation runs in the corner, or music plays, text scrolls and a narrator explains whatever it is you're presenting people will ultimately enjoy.

It's a very easy to use. But so simple to learn that you may have to make your own little book. MORE.

Everything in the store is organized by means of a flow line which links each system from with a few arrows the bottom of the screen. You can practically see where they will begin and end as relation to each other. And the other part is that you can change these values by simply dragging the line backward or forward with the mouse so that when each component will begin and end.

It's a challenge to do the all of Q-Media's abilities would be absolutely one better, difficult to be really difficult to control. But also, it is to make that every picture is worth a thousand words, and we don't have that much space.

The only problem you're likely to encounter is enough for all you've found.

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**EXTERNAL FAXMODEM.** This sleek V.FC/V17 model

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external model. **PCMCIA FAXMODEM CARD.** No bigger

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faxes and data at 14,400 bps. Effective throughput up to 57,600 bps with data compression. **Asynchronous operation**

Stores three telephone numbers and two configuration profiles. Compliant with PCMCIA 3.0.

**POCKET FAXMODEM.** Ideal for use with laptops, this model has all the features of the fax/modem card, plus audio monitor.



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FIG. 4 ACCEPTED

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Windows XP SP3	Windows XP SP3	Windows XP SP3	Windows XP SP3	Windows XP SP3	Windows XP SP3

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# Howard Rheingold and the Next Revolution

BY GRAEME BENNETT

Attendees at *Wired '86*, the *Wired '87* *Forum on Interactive Technology and Equipment* had an opportunity to hear a keynote address by Howard Rheingold, the well-known author of *The Virtual Community - Homesteading on the Electronic Frontier*.

Rheingold, looking very flashy in a loud yellow suit, seemed to be an engaging speaker. There were some laughs from his talk.

Rheingold had his audience pegged right

from the beginning. "As you know, without an AI, the bottom of the food chain. You don't often get a chance to look your audience in the eye." Rheingold says that his idea of writing was formed by what he had read in books and more in papers, that it is really a life-enriching activity.

"I think the reason so many women dislike it is that it provides a place where they can go out and share people."

Rheingold said his first introduction to computers was the venerable Apple II, back in 1976. Indeed, using it as a word processor wasn't easy, there weren't any word processing packages and the first Apple II hardware could only support upper case letters. Arriving at Rheingold, the developer of the first Apple text processor said that was and his team of Apple designers thought

that users would only want to program in BASIC or Pascal programs.

Within three months, Rheingold says he was spending two hours a day on the computer — in the increasing contention at his wife, Lynn Howard, "if you spend more than a five-hour a day talking to people that aren't them, the people that are there will get pretty upset after a while."

Nonetheless, Rheingold felt that he was on to something important. "The thing about interactive relay communication is that it's like a bookend doesn't talk back."

"And its kind of a gift economy," he maintains, referring to the free exchange of information on the net. "Three days where everything is a market economy. It's kind of nice." Now he got to prove the pump, says Rheingold. If someone needs more info, you provide it.

He recounted an incident where "Wired" was tagged on in the parenting conference with the unhappy news that he can had just been diagnosed with leukemia. Within two weeks, says Rheingold, an online support group formed. Doctors who were able to analyze blood count numbers provided hope

that, indeed, the situation was not as grim as Phil's family had feared.

Howard Rheingold is bullish on the potential of the telecommunications but thinks that the Clinton administration's "info highway" emphasis is prioritizing the wrong thing. "We've gone to see the electronic highway to the info superhighway in six months."

"It's about information — it's about communication. And it's not a superhighway, it's a network. It's about people connecting. It's a many to many medium. It gives writers a new opportunity for distribution."

"It's about networking in all mediums are going through the same place. We are just beginning to see it. It's like the period just after the printing press was invented. And, most definitely it's a period of innovation."

He demonstrated a few of the many micrographs on USENET, a computer that spans over 100 countries, and has millions of people participating. Rheingold mentioned that, when the events in Tiananmen Square occurred, the information was uploaded to



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# The Canadian PC Market: A Rite of Passage



## According to an IDC Canada report, entitled "1994 Canadian Single-User Systems: Review and Forecast—"

• Single-user systems had a banner year in Canada in 1993, growing 17.3 percent to an unprecedented 1,065,800 unit shipments, with the overall value of shipments growing 8.7 percent for the same period. This substantial improvement in the Canadian PC market can be attributed to a number of factors, including the migration to Windows, the booming notebook market, and desktop PC upgrades.

• The general outlook for the Canadian single-user systems market is not overly good for the near term. In 1994, the market is expected to grow another 11.3 percent to 1,189,800 unit shipments. Overall unit shipments are projected to grow at a CAGR of 4.2 percent between 1990 and 1998.

• Vendors such as Compaq and IBM are tending to focus on product affordability, new distribution channels, consolidating local sales, and addressing new product cycles. The advent of Pentium and PowerPC entry level processors in the IBMx86, and an abundance of notebook (and smaller notebook) PCs has contributed to a product mix shift by different firms that of a year ago. It has also contributed to growth in the market as users upgrade to newer technologies in processors.

Contact: IDC Canada 416-582-8000

## Howard Rheingold...

Continued from page 52

EXPERIMENTALLY as it happened, he was one who lived heavily and had a heavy career.

Indeed, Rheingold observes that with 500 million ePrints contacted, every person has become a publisher and a reader. "There are 50,000 ePrints in North America alone — up from 40,000 a year ago. I think these ePrints are really the main sales of the new revolution."

Every person is a potential system. This, says Rheingold, represents a radical decentralization of power — a system that will open doors and tear down walls. The system, he continues, is that every node is a potential source of decentralization. "There will always be a place for a human reporter, writer, or editor — the person that you come to trust."

Howard Rheingold is the executive editor of Wired Magazine's online edition, wired. WIRE 2.0 was last year's 10-10 in Vancouver, and listed by WIC, Science Fiction University and Emily Carr College of Art and Design. □

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NO — In studies funded in part by NYSOL and Internet Lynch, researchers at the City University of New York have shown that at-risk students can benefit a lot from access to modern-equipped PCs.

The study was a three-year project by The CUNY Graduate School's Manhattan Institute Center for Public Policy in Telecommunications.

"The story of Project Tell is not about computers," insisted Hinton. Researchers, director of the Internet Center in a past semester, "is about finding ways of learning, the technological playing field is more than provide the greatest social and educational benefits to students."

The project, funded by a US\$1.5 million grant from NYSOL, provided a group of sixth-grade students in New York City Public Schools, who had been identified as at-risk of dropping out, with access to computers and information systems both at home and at school while offering training and support throughout the process.

Students received computers and network information systems in their homes. All who consistently remained in the program were able to keep the computers. The project also provided support and training for teachers in their efforts to learn to use computers with telecommunications rapidly by and to integrate this use in the classroom. As a third component of the project, NYSOL's Video Monitoring service was installed at a Manhattan public school.

Researchers discussed the study with New Yorkers. "There have not been enough studies on kids who are academically at risk of failure, how fast they can learn and the country. What we wanted to do was study with New Yorkers, who might not have graduated high school otherwise or have been at risk for drug use."

Researchers and the study used the New York City Public Schools' definition of at-risk students: "reading levels between 20-40 percentile, a history of truancy, and moving a lot from one place to another." The students were placed in a random group of 100 who also had a "control group" of at-risk students who didn't get the technology, she said. "There isn't much known of how these students respond to electronic communication and electronic learning."

"Many of these students were functional, to illustrate, from home that was functionally illiterate. They didn't read well or write well," she continued. "We had so much we can use. NYSOL provided the computers in the home setting. We place telecommunications in the homes of these students, and the students became the teachers of the other. We provided training for the students and teachers in their class."

"With the students in the home, the goal was to motivate them to learn as well as to empower them. We responded to the



## AST Advantage Focuses on Functions

ASF may have created the dream machine for the home and small office. By combining powerful productivity software, multi-media and telephony features, there are advantages here to a system just forward in time of functionality and ease of use. The real test you can conduct is to read ASF Works, a desktop enhancement that offers an alternative to but does not replace, the Windows Program Manager. ASF Works provides peak feature access to the widest user base packages that come bundled with the

systems, including a few cases of substantial loss of the parasympathetic (the vagus nerve) system.

Included in these packages are excellent disk and video presentations on understanding your machine's limits from installing the simple things, like which port your modem plugs into, the maintenance help system provides a complete encyclopedia of computer know-how — and an exhaustive one at that. Forget the well-thumbed computer books. This system is loaded with useful information.

[illegible]

Advantage users ready to use DOS and Windows are pre-installed and pre-configured. The machine boots up right into AOL World, where the user can launch the software or jump right into one of the many useful, tested applications. Included is a printing program that creates cards, signs and brochures. There's a daytimer based on the Lotus Organizer, file-word, Excel, and other helpful programs such as CalcCheck for personal finance, word processing and spreadsheet applications are included as Microsoft Works applications Edition.

What really makes the machine valuable is its telephony capabilities. The system allows you to build your own relational system with user-defined tables and up to 14 million. Using the system's flexible pattern-matching capabilities you can even create caller-specific menus or whenever Auto Martin calls you can have the machine tell you that number isn't in town.

The networked system uses a drop-and-drag menu basket, so you can build your networked menu on the screen. This will be the envy of many a home office. You can also specify the calls on the same line as your menu call. Use and networked browsing are also featured. The system automatically detects the call type. The Lotus organizer has been specially modified for this system. It can automatically dial numbers and pull up records based on call ID information.

The machine also has a feature called "line snooping." This allows the system to listen for any outgoing call to any number on your phone line, and by listening to the numbers in the log the cell. This can be useful for tracking long distance billing and unauthorized calls to toll-free numbers, etc.

User registration with the Advantage is simple: you fill in an on-screen form and call a 1-800 number and take a pass system that automatically registers you. The system comes with lifetime toll-free 24-hour 7-day-a-week technical support through the system's 800 line, or on phone. What is also a one-time on-site start and service expense.

11/11/2011 11:11:11 AM

While the A1 Advantage comes with some impressive software and multimedia capabilities, it is behind the times as far as technology goes. It lacks local bus technology, which is important for multimedia performance.

It is an useful study and market research has given me advantage. IIT examined many of the difficulties you may have with the so-called 'user friendliness' of Microsoft Windows and found that navigating and finding their applications isn't among them, nor where the problem was. All Windows, since this time, and the manufacturers help anyone easily makes advantage from The technology capabilities make it an affordable and indispensable tool by the home or small office. (4)

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# SPC's Spotlight, Harvard Upgrade

BY JAMES MACFARLANE

*After cutting half of its staff this year, Software Publishing Corp. is shipping Harvard Graphics 3.0 and a new product, Spotlight.*

**S**potlight fills an important gap in the presentation software industry. While most presentation graphics programs are good at making slides, they're poor when it comes to actually helping you perform the presentation.

When performing, most people resort to hand-written notes on the hard copy of the slides. Others end up juggling output from a word processor, which can make it difficult to synchronize when they're trying with what people are seeing. Another approach is ideal for a professional presentation.

Spotlight allows you to take the slides from virtually any presentation graphics program (including those of SPC companies), and test yourself before you print slides. You can arrange the slides visually and the program automatically moves your screen with them.

Timing can also be important in a presentation. Spotlight allows you to set up duration for each slide, and to adjust the timing dynamically should you suddenly find one your selected time is shorter or longer than expected. An on-screen clock can provide a gauge of your planned timing and when you should be moving to the next slide as well as showing a preview of the next slide.

While Spotlight allows you to conveniently run your notes, monitor your timing and preview your next slide, all you need your computer to use it is the slide you are discussing. The package provides some helpful ways to do this.

It is possible to connect your capabilities. This lets users use a slide viewer, use LISA connections allowing the presenter to edit notes when they're not in. Messages can be sent between conference members via IBM StarChat facilities, during the presentation.

Spotlight comes with a multi-media cable, allowing one PC to display the slides and the other to serve as the presenter's control panel.

It features supporting dual-media frames can output one screen to the display screen and one to the presenter's.

Spotlight is available for an introduction price of \$99 (hard dollars), after which it will sell for \$129. SPC offers a 90-day money back guarantee and 30 days free technical support.

## Harvard Graphics 3.0

Harvard Graphics 3.0 is one of the most popular presentation graphics packages, is highly versatile and easy to use.

Version 3.0 is aimed at helping users make better layout and content decisions by providing options for many popular presentation styles as well as providing automatic slide design features.

The default templates for things like annual reports, marketing plans and sales forecasts forms not only provide multiple views of the results that can be used in a presentation but also provide a ready-to-use cover that includes important items that should be included in the slides. Think of it as planning clip-art.

To add a little  
more pizzazz to  
a presentation,  
Harvard 3.0  
includes  
animation clips

While a lot of people may be good at planning the content of a presentation, not everyone has the graphic design skills to make it look good. A design-oriented well-experienced user of your presentation and suggest changes where it believes visual improvements could be made. For example, it will suggest adding labels to a chart or changing the order of a heading if it does not provide enough context and with the text around.

There is also a "quick sketch" which lets you draw the information being presented. You can draw a rough sketch, then drawing a clean and finish it down into well-defined elements that are clean, focused and consistent.

To add a little more pizzazz to a presentation, Harvard 3.0 includes animation clips. While this is not a complete animation package, it does provide a number of pre-defined animation sequences that can be used for the slides of an intense meeting as well as detailed status reports.

Other enhancements in version 3.0 include a consistent effects palette as well as "quick books" (the ability to perform changes before making final content and the right margin between content and the right margin) features that allow you to quickly get on and out of the slide data used in your next presentation is convenient.

Harvard Graphics 3.0 is priced at \$495, and an upgrade from a previous version or competitive upgrade is available for \$295.

Software Publishing Corporation 1-800-334-2662







## bookreview

# A 10th Anniversary Retrospective of the Mac

BY KEITH SCHERZIG ROBBINS

**Title** "Insanely Great: The Life and Times of Macintosh, the Computer that Changed Everything"  
**Author** Steven Levy  
**Publisher** Bantam  
**Price** \$29.95  
**Available** 152 pages, 1994



**I**t is fitting that on the tenth anniversary of the launch of the Macintosh computer we go directly to the story of its making. Written by the author of *Waste* and more recently *Abby's of 42nd Street*, Steven Levy takes us through a journey of how the Mac came to be and the people who created it. "Insanely Great" was how Steve Jobs described the Macintosh when he was head of Apple Computers; he believed it would revolutionize the way people used computers. It certainly did so even by most byrigating. PC men would have to agree.

The book starts out by looking at some of the predecessors to the Macintosh. This includes the Alto, a computer designed at the time produced by Xerox's PARC. Interestingly it had a few megapixels graphics screen, a mouse, and a windowed interface. Soon after the Alto came out, some Apple officials visited PARC, and were immediately inspired to produce a similar machine of their own. The first response to the idea was: "Who would be Apple Corporation's own computer, the Lisa."

When the Lisa was launched in 1982, it was the most advanced personal computer of its time, and convinced many of the features shared by the Mac. But the Lisa had its drawbacks. It only ran proprietary software, was not very fast, had a disaster drive that didn't work very well, and contained serious bugs. It was also prohibitively expensive in some millions of dollars in retail, and it was a commercial flop.

While the Lisa was being developed there was also a plan to put together a less expensive computer. This project eventually produced the Macintosh. This computer was designed by a dedicated, sometimes fanatical, core of hackers who loved the idea of producing a computer that could "put a dot in the Universe". Much of the story of the Mac is also the story of Steve Jobs, who took over the Macintosh project and made it his own. A lot of the Macintosh's success has to do with Steve Jobs' influence on the project. But he was fired as head of Apple because of his behavior.

Despite the fact that the Mac was "insanely great", it became less so when taking a hard look — unless you were Steve Jobs. Part of the reason why Jobs was let go

from Apple was because he refused to leave the company that the idea was not selling well was supposed to. The original Mac was expensive, under-powered, didn't have a hard drive and had no facility for expansion. When these failings were addressed with the "Fat Mac" that was released later, there still weren't many programs around that you could easily run on them. The Mac's future was secured when, in 1985, AppleLink was released — the killer app? That made the Macintosh the de-facto computer for desktop publishing. It was this program that pushed the Mac into business and home to large numbers — and probably saved Apple from going under.



Is why didn't the Mac take over the computer world? The author places the blame on Microsoft's relatively low market penetration on John Sculley's decision not to drop the price of the Macintosh in the mid-1980s, which would have put the computer into more homes and businesses. Levy also points out that the true success to the Mac was not put on by Apple, but by Microsoft in the form of their Windows operating system.

Sometimes the book becomes a bit of a hype for the Macintosh, but honestly there is no suggestion left told by an author who has a gift for spinning a good story. While it's hard to say when the Mac died, Apple is on going to be 10 years from now it's a sure thing that the Mac will continue to be thought of as the computer that changed everything.

Source: Penguin Books Canada Ltd. price \$29.95

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## Plug & Play On Its Way

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION  
PUBLISHED WEEKLY

After more than a decade of users having to open up PCs with screwdrivers and fiddle with DIP switches - as well as understand DMA, IRQ and memory mapping settings - just to install something like an internal modem, Play and Play aims to finally make this entire process automatic.

**I**t should be no more difficult to add a CD-ROM or sound card to your PC than it is to add new speakers to your home stereo: you plug in your new speakers and they immediately start working as you would expect. That is the goal of Plug and Play, and the prospects for the success of the scheme seem good, with backing from Intel, Microsoft, Compaq, Philips, Technologies and Western computer makers.

Early this year Microsoft and Intel provided the hardware specifications to enable the first implementations of Plug and Play available for the Windows 95 and Windows for Workgroups 95 operating systems. Compaq— with its recent 64-bit-extended Compaq Design 386 and some of its new portable systems— is also delivering Plug and Play compatibility with future Plug and Play operating systems.

The Real Plug And Play operating system on the market will be the next generation Windows (code-named Chicago) which is set for a release later this year. Plug and Play devices such as memory cards, network cards, hard disks, modems and sound boards are being developed by a number of other companies and Chicago is designed to be able to coordinate these too.

**Chicago Network** is unlikely to be the only operating system with Plug and Play support. The standard has been designed to be operating system independent, so that a system for Linux or Windows NT is quite possible, even when running on multi-bus IBM hardware.

This is partly because hardware makers have worked together on this specification. Last year, for example, a coalition of more than 20 computer hardware and software companies released the Plug and Play PnP (Lower Input/Output Services) specification. The industry standard Plug and Play BIOS is a set of instructions embedded on PCs which should "make it almost totally easier to install and configure Plug and Play computers and enable new, innovative system designs," according to manufacturers' statement.

To test the Plug and Play standard, the system BIOS of personal computers must be enhanced to provide identification and configuration of system-based devices such as the hard drive, random access memory (RAM) and other devices. This is critical to make other devices be integrated into the motherboard of PCs. The Plug and Play BIOS should also tell the system not to use incorrect configurations.

For example, connecting to notebooks can prove easy if you're already logged in while the system is running a shell. Just checking out Plug and Play systems will be able to connect this process from software via the BIOS. When accessing the notebook from a dock using another system with a Plug and Play BIOS, and open along system, connects it; configurations and to reflect the notebook state without the user having to return.

In complete Plug-and-Play systems using Plug-and-Play drivers and operating systems, the PC's job defines the architecture as it

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# Books on Demand: Interview with Jack Powers

BY KRAGNE BENNETT

*Jack Powers is director of Graphics Research Laboratory in New York. The Computer Paper spoke to him on the future of documents, both paper and electronic.*

Research and teaching. And something like an percent of inquiries go straight to the libraries — printed. And things play in a highly mobile process.

With the new technology that I use there making facilities, universities, and so on to produce books on

demand — we're seeing people using it in teaching today. Within Xerox I also developed the Documents on Demand system in New York on April 1984, we saw some people doing things we just couldn't have thought of. Their own personal laboratory applications. That's like

great thing about a show like this. People can come and see how and what others are doing. It's really learning by example. □

Contact Dennis at 714-422-5026 for more info on Open Document Systems.

**QCP:** The Graphics Research Laboratory sounds like an interesting place to work. What do you do there?

**A:** Jack in 1984 we did the video printing to Apple in 1983.

These days, most of our clients are in publishing. We're helping them look at how to do not just video publishing, but better publishing.

**QCP:** How do documents on going electronic in what about copyright control?

**A:** It's an important problem. The problem with copyright copying is that there's no incentive to produce the content.

**QCP:** As we're now in the digital typewriter market...

**A:** With one of these systems you have the opportunity to keep control. Xerox has introduced a system that automates copyright management, to provide copy rights protection.

It is not it is starting at the university level.

IBM's hardware has a system — microfilm publishing. We're going to place it in place at McMaster University, and several other sites. There's a number times in the U.S. publishing it.

**QCP:** What about traditional text publishing? What do they think of books-on-demand?

**A:** Some are called "traditional book-publishing" such as John Wiley. Will come for you buy just a chapter of a book. Say, a certain number of pages at 10 cents US per page. The author gets 10 or 15 percent royalty.

Canadian Encyclopedia Collective, known as Encyclopædia, is trying to switch to the magazine to increase the royalties that authors get.

The same thing's happening in the music business. Where the artist can pay the royalties for single sold off a CD. They are in the software business — too.

**QCP:** Do you have any figures on what is happening in the document publishing market?

**A:** Clearly we're seeing lots of ink on paper and more ink on paper in short-run document publishing houses. This year, an estimated 2 million papers will be put out from short-run publishers. In 1995, that number is expected to reach 2.5 to 3 million. It is just going to mean that we'll still meet most of the needs of the printers we're up to in the short run. They're doing longer run — they'll be doing more kinds of publishing, more than just the traditional short-run stuff. They're doing more kinds of publishing, more than just the traditional short-run stuff.

In traditional publishing, 40 percent of the cost of a document is in what

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# The Internet Bazaar

BY ROBIN ANDERSON

I have been goggling on the Internet for a regular basis for nearly 10 years now. Recently I've been going more frequently and I can now get this from my home computer. It's been called the place where I am finding jobs around the place and helping other people to search.

Like any good tool, however, it takes my fingers and the sometimes rights of the Internet. The merchants offering free samples of their work, the cut down who are simply giving their material away. It's usually not a lack of the latest or more available locally, and later on to some of the more exotic connections going on in different nodes and countries.

I always make a point of noting the call where they give away the great deals of literature, from clothing to books. However, if any who has come along for the ride, we usually stay in at the fundamental equipment. I don't have a plan and I'll go to the help to study just your feelings.

Like most of the vendors in the Internet, I usually just appear the things on their websites. There's a particularly many use now the bookish who is apparently can afford to all the bits of the planet can be used to get people. There's usually a crowd standing around and waiting at the door.

Another one, based in some western provincial town, is usually to be found standing next to a large flat box with a flashing light on top. It's not to be too much to

be used to be used more of the time.

Sometimes bad things do happen here. Parts of the Internet are quite busy and can down but most people have the good sense to turn off of their area. Inexplicably though, there are uninvited children who sometimes find their way into these parts, and sometimes they suffer the consequences of their parents' inattention. They are sometimes well published by the Internet. The other side is just a few. There are an estimated five million people who can go here, and so far from being a single store by the Internet.

In the last year, we have been getting an increasing number of visits from visitors to various parts. To these people the important nature of the Internet seems obvious. They look at the site directly in display and are only "most from things" and "beats".

Continuously enough, not only do they seem to have found in giving the nature of the community, they frequently have an understanding of the technology involved either. Their proposals to bring "new and color" would be highly likely to be dismissed if they were ever put into place.

It also looks as if big business and government are becoming worried by the size and power of the Internet. There have been proposals to use it to the ground and replace it with

Continued on page 78



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This new laser-on-CD recording technology also has serious implications for the security of the CD media. Compact Disc has long been touted by its developers as a "bullet-proof" way of distributing software, music recordings and - more recently - commercial movies for playback on compact disc, CD music players and CD video players.

But the advent of the laser-on-CD-R recorder means that those who want to pirate anything recorded on a CD will now have the technology to do so. This is particularly true where multimedia software is concerned. In the past, music and video masters have been placed in their analog forms using traditional tape recording and VCRs and most people believe this has been safe because it would take so many different floppy disks to record all the information held on a CD-R that doing this was so tedious and time-consuming it wasn't done.

With the release of laser-on-CD-R players, that situation is not so benign. Now CD-R discs produced on these new CD-R machines can now be used to search information as installed CD-ROM discs. And the discs produced using these recorders can be played on any standard CD-ROM player.

The only possible financial disadvantage would be the cost of the recording media. (Blank CD discs are not impossibly high priced, but even so, at the early stages of this technological development, that is not really the case. You can buy blank, recordable, CD discs for around \$10/40 each - the price could easily come down to \$5 or less if you buy the discs in bulk and do so regularly from a single supplier.)

For the computer industry, we need to come up with a strategy to deal with this issue.

It is possible, however, to easily create the danger of CD-R piracy. After all, piracy has been with the computer software industry almost since Day One - and you don't see

any evidence of software piracy billions of dollars after the fact. The nature of software has been from such that software buyers need good documentation, strong after-sale support and the ability to upgrade more than they need to save a few dollars on buying a printed copy of something.

And while the CD media integrates some of these problems by allowing enough room on the CD to hold both software and documentation in a single disc, the cost of many CD products means that less of you will want to save legitimate support for their CD-ROM software purchases. □

**Police Seize Counterfeit MS Software**

REDMOND, WA (MS) — A series of police raids to up their action the U.S. have seized up about 100,000 copies of Microsoft software.

Police seized over 10,000 packages of Microsoft software in California, Georgia, Louisiana, Maryland, Texas, and Virginia. Authorities say the seizures are evidence of a large-scale counterfeiting ring operating across the country.

This is not the first time counterfeit Microsoft software has been seized, and it is not the biggest seizure. However, it may be the first time the company has seized software other than MS-DOS and Microsoft Windows. Authorities also seized CD-ROM versions of Microsoft's Windows release. (Source: Microsoft)

Microsoft says the counterfeit software may be as good as it did not contain the necessary system files, 386 Celeron, Intel or Microsoft Corporation of Authorized Users to Microsoft's Windows software. □

**Hardware****DynaTek Intros Big Mac Drives**

REDMOND, WA (MS) —

Seagate's portable multi-format hard drive, the DynaTek, has moved into the Apple Macintosh market with a line of drives, tape drives and optical storage devices, all using the small compact form factor (SCSI).

These are DynaTek's first products designed specifically for the Macintosh, compact, portable, desktop, and laptop.

All the new models contain DynaTek's design and software with their own controllers from other manufacturers. The collection includes five hard drive assemblies using Quantum's hard disk, two removable-media drives with Seagate cartridges, three digital audio tape (DAT) drives using Sony's technology, three removable optical drives using Fujitsu and other components, and a 600 megabyte (MB) CD-ROM drive based on Toshiba equipment.



All the drives are up-ported with Compact Pro 1.0 software from DynaTek that provides diagnostics and testing as well as a SCSI code editor and an audio compact disk control program.

They also support the SCSI Manager 4.0 that comes with Apple's Power Mac models, making use of its sophisticated controller to provide access to multiple SCSI buses with increasing capability. This capability may be combined with the approachable controller mode (OTM) and in high-speed or streaming, slow, discontinuous access in more than one SCSI drive. (Source: Apple)

Prices for the new models range from \$1574 to \$2499 for a 1.7 gigabyte (GB) available optical system. Hard drive units are available in capacities up to 1GB and removable media drives in capacities from 10MB to 270MB.

Contact: DynaTek 800-833-3000, fax 800-833-0055







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## MS SoundBits: Classic Cartoons from Hanna-Barbera

One of the hallmarks of the Windows operating system is the ability to customize features of it to express aspects of you personally. Some people do it with screen savers and Windows Desktop wallpaper and other sounds. The Microsoft SoundBits collection (MSB) are hardware also must include with sound.

The **Hanna-Barbera** cartoon collection of sounds features some of the best from these classic producers of cartoon characters from such legends as Scooby Doo, Yogi Bower, Daffy Duck, the Looney and Looney Tunes.

Many sounds and graphics are available from online sounds but rarely as they are well recorded or edited as the sounds that appear on this collection. Many of the sounds have been chosen to provide Windows system events.

If you use the built-in sound scheme, you can hear how they use "the main" Yogi when you start an application and how he says "yes" or "no" when you click a Windows Program. The collection also comes with a lot of the famous sound effects that accompanied many Hanna-Barbera cartoons — you can achieve your own with a variety of sound effects, thank and go to the four sound effects. This is all ready to be used and most only for people who want to use up their imagination in the Windows system. You can also use the sounds with this sort of thing to a better sound effect, but as sound is clearly becoming an accepted part of computer computing, it's hard to deny a bit of fun.

One drawback should be noted. Playing several files can take up a lot of Windows resources for the time you are playing and have been known to slow down files. Always optimize files and minimize Windows communications programs.

The Microsoft SoundBits featuring Classic Cartoons from Hanna-Barbera is a fun collection of sounds that will bring any old computer. **Scooby Doo!**

Contact: **Microsoft Corporation**, 1-800-562-5548

## WordPerfect 6.0a for Windows Interim Release

Keyboard version of WordPerfect 6.0 for Windows can now deliver a copy of the interim release WordPerfect 6.0a which provides a number of enhancements over the previous edition.

Of particular interest to most users is WordPerfect's ability to increase speed and reliability. Users will find that functions like creating mailing labels, graphics and the spreadsheet feature will run faster. WordPerfect has also provided better integration with the OS/2 and Windows NT operating systems. An additional feature is included to ensure either the whole program or selected parts of it.

WordPerfect has also chosen to be a free status feature. A **QuickConnect** feature automatically replaces commonly misinterpreted words without being prompted, and it is the **QuickConnect** and **Translation** feature will help the user in the learning curve for people who are just being introduced to Windows word processing.

The upgrade is available free to registered users of WordPerfect 6.0 for Windows.

Contact: **WordPerfect Corporation**, 1-800-461-8734

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# training

## Using Windows For Workgroup Utilities

Microsoft Windows has gained a well-deserved reputation for being powerful and easy to use. The many built-in utilities within Windows can make your working life even easier. Windows provides tools for making all kinds of changes to your system and creating custom solutions to your problems when you need them, but a little guidance is how best to use these tools can go a long way.

And that is exactly what we'll offer in this article. We'll also include some specific insights on the new utilities added in this issue for Windows 3.11 (the version we're currently shipping with many new PCs).

### The Way To Change A Display

One of the best examples of how knowledge can empower Windows users becomes evident when you decide to change display settings to the best one for you. And you may well ask: would you want to do it all for example, you can assign a new application that requires a higher screen resolution than was currently installed display driver option. If you have installed a new display and display adapter card in your PC and want Windows to make use of it, there is a new display driver in its order. Windows makes the process of changing your display resolution in the user you need to use Windows Setup to do so.

Many users naturally assume this means using the Windows Setup assistant (even with the Windows environment) and choosing a new display driver from the list and then installing Windows using the new driver. This is an entirely plausible way of doing things provided that you are sure you have selected the right screen driver and that you have the necessary display card containing the screen driver files.

However, you are in a situation of which some advice you should be using and want to use a couple that are likely candidates do NOT do it all within Windows. This is because by doing so, you run the risk of making Windows temporarily unusable. If you select a screen resolution which is incompatible with your display (or video card), Windows will reset and show you a screen that is harder for you to read or completely white (blank).

In this particular case, it is a much better idea to use Windows' display and the DOS version of Windows. From the DOS prompt make the changes to the set-up resolution and then use it to boot. If it doesn't, you can always start your computer — in which case a driver-installed Windows display using the ALT+F1 followed by space bar key combination — and use Setup from the DOS prompt to change the screen resolution back to what it was.

### Collecting In The Clipboard

The Clipboard in Windows 3.0 and Windows 3.11 has always been a useful place to store, possibly move objects that you want to copy or paste between applications but users have always had to place such items carefully because the Clipboard can only hold one object at a time.

All of that has changed with the advent of

the Clipboard in Windows for Workgroup. It allows you to store multiple "clipped" objects in a Clipboard rather than the Clipboard page to which each object is stored and then mail the Clipboard pages as they are needed.

Because these items are stored as objects on Clipboard pages, not as traditional data files, you can give them longer more descriptive file names than the regular 8.3 characters DOS file name convention allows. The Clipboard page containing your 1000 profit by division graph named for last (for example, can be called "1000 Division Profit Graph" which makes it much easier to find and use when it's needed.

The Clipboard does not, however, actually replace the Clipboard. Instead, copy and paste operations will take place via the Clipboard. If you want to store an item in the Clipboard, you must first copy it from the Clipboard and then paste it into a target page in the Clipboard. Once you have a new page in your Clipboard, you can then make some changes about how you want that page using the "Tools" in the clipboard, you can choose to view the page in a list showing the entire collection of pages in the list or look at "thumbnails" of all thumbnails of the objects in the Clipboard page.

### Running Out Of Time In The Windows

If you are sharing your PC's resources with other users (on a Windows for Workgroup network) — and find that its performance is suffering — in a minute — you can do some preliminary investigation to see where the biggest drain on resources is coming from. This investigation tool runs in the form of a utility called Windows — which graphically shows you the percentage of CPU (central processing unit) time that you, and the people in your workgroup are using.

This can be useful in planning how you share resources with others, perhaps deciding that large print jobs be carried out when the computer is shut down or to the shared printer is not being used to make jobs print faster.

It, however, you want a more specific look at how you are constrained by your Windows in the Workgroup network — and the resources it makes available to you — then you will want to use the Windows' window utility that comes with Windows for Workgroup. The Windows' window utility is an utility computer resources (including files and printers) are being used by others on the network, which other computers are connected to your own and what percentage go along with each of the connections.

### Putting Your Type On The Map

One of the great utility tools of the Windows 3.11 is a tool to use the typographic options that provide suitable on screen fonts that match a particular set of printed fonts. TwoType makes that when you can screen a what comes out of your printer. Over it you only have an old dot matrix printer.

A good collection of TrueType fonts comes with your Windows system (including foreign language characters) and a couple of sets of "symbol" fonts (TrueType fonts are actually sets and pictures that have been "mapped"

with letters of the keyboard so that when you press a symbol key and press a key on the keyboard, a picture — rather than a letter — appears on the screen.

The great thing about symbol fonts is that, because they are so stable, you can exchange and check them without losing the

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### 278 - Supporting Windows with Networks

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	Amstar	21	CPS Computer Co	13	MT Computer Supplies	75	Tec Computer Sys	68	Computer Prod. Serv	8
<b>Books</b>	AmPro	18	Digital Equipment	8	MPM Industries	87	Tel Computers Inc	8	Compu-Conc & Inter	8
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PC World	BROADB Training Int	54	Futaba	17	Oswent Computer	88	Wald/Business Sys	38	Flowchart	4
Personal Computer Books	Big Box Computers	79	Futura	17	Optelcom Techn. Inc	73	Yulex	38		
	Bentall	68	GO Systems	75	Pacific Ridge	85	YAC Computer/Inf.	43	<b>Service Bureau</b>	
<b>Classifieds</b>	Bowen	88	Grainbow	10	PC Factory	85	Zigzag	55	Copysort	8
TOP Classified	BYU Learning Sys	35	Gratland	67	PC Solutions Group	38			Live Support	4
	Byte	45	Global Data Services	85	Pivotal Service	71	<b>Lottery</b>		Microprint, Research	8
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Parsons Int	CBST	14	HVM Computer	83	Quik Checkup	85	<b>Maps</b>			
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	Canora	11	IC Technology	82	Remkon Computer	78			Marcom Comput. On	8
<b>Hardware &amp; Software</b>	Central	62	IGCT Technologies	85	Rescal Computer Sys	45	<b>Networks</b>		Shoreman	
1 Step Computer Shop	Chico Canada	35	ITD	8	Rezonics	85	Centline Technologies	78		
183 Comp. Intensive	CIO/Computer/Laser	75	Intel	7	Served by Technology	82	PSP Canada	78	<b>Subscription</b>	
RECON Technologies	CIMA Computers	85	Keltron Computer Inc	78	SOB, SystemSales Int	87			TOP Subscription	8
BRUNO Technologies	COM Bus Service Co	82	RGB Enterprises	87	Sigma Computer	73	<b>Online</b>			
SA Computers	CompuNet Systems	85	RV Computers	18	Sonus Tech	87	CompuNet, Inc	18	<b>Training</b>	
AAG Computer Supply	Compass Technology	35	Lance Electronics	81	Stratix Machine	85	CPS Online	77	Int. In Advanced Tech	8
ABC Computers	CompuNet Plus	79	Lentex	85	Solt Comp	84	Prologix	8	Macros	8
Willys Plus	Computer Home Sol	73	Lux Computer	38	Solus Business Comp	34	The Connection (BB)	53	S&T	8
AC Systems	Compu City	42	Legend	88	Stor	85	Statis Support/Res	64	S&T Inst. Institute	8
ACSI Technology	Comp Computer	85	Logic Computer House	87	STB Inc	87				
Adams Business Ctr	Computer Upg & Co	92	LRG	81	Steads Direct	45	<b>Serial</b>		Training Res. For Tels	8
ADSL Inc	Computer-Pedia Supply	78	White Chip Group	45	Stor Inc	48	Microstat		Local Priority Deliv	8
ACM Corp System Ltd	CompuServe Plus	73	White Ocean Canada	79	Sym Microbus	38				
Adm. Products	Corbell Computer	85	Winabooks	33	Synknet Inc	8	<b>Service &amp; Consulting</b>			
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